

1 Also with reference to Figures 2 and 3, it is apparent that non-skid continuous conveyor
2 belts (10, 41, 47) can be combined with more than one cutting or shaping tool and combined to
3 form multiple machining stations. Another alternative embodiment of the invention utilizes high
4 pressure abrasive cutting means.
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6 I CLAIM:

7 1. An improved apparatus for feeding flat, rigid, cuttable material through a powered
8 cutting means comprised of:

- 9 (a) an input non-skid continuous conveyor belt means, for moving the material to be cut
10 in a direction parallel to its length to a cutting means;
11 (b) an output non-skid continuous conveyor belt means for moving the material after it
12 is cut in a direction parallel to its length away from the cutting means;
13 (c) a hold down means to hold the material to be cut against the non-skid continuous
14 conveyor belt means;
15 (d) a guide means to maintain the position of the non-skid continuous conveyor belt
16 means relative to the cutting means;
17 (e) a drive means to power in input and an output non-skid continuous conveyor belt
18 means so their rate of movement (RPM) is identical.
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21 2. Apparatus as defined in Claim 1, wherein said power cutting means includes one or
22 more circular saw blades adjustably positioned along the length of a saw drive shaft and
23 positioned between an input non-skid continuous conveyor belt means and an output non-skid
24 continuous conveyor belt means, parallel to their length and powered by a motor means
25 communicating with the saw drive shaft.
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27 3. Apparatus as defined in Claim 1, wherein said non-skid continuous conveyor belt
28 means includes a section of material having a length greater than its width and having a non-skid

top surface and a durable bottom surface to which is bonded one or more guide 'V' belts, extending the length of the non-skid continuous conveyor belt and extending a distance from the bottom surface of the non-skid continuous conveyor belt and having a width so said guide 'V' belt engages a 'V' groove in the drive means as defined in Claim 1, and having its end joined together to form a continuous conveyor belt.

4. An apparatus as defined in Claim 1, wherein said drive means to power an input and output non-skid continuous conveyor belt means so their rate of movement (RPM) is identical includes an inside feed roller on the input side and a feed roller at the input end, said rollers, and a feed bed spanning the distance between them, having 'V' grooves in their faces of a size to accommodate the guide 'V' belt on the bottom surface of the non-skid continuous conveyor belt means, said non-skid continuous conveyor belt means being securely fitted around said feed rollers by adjusting the mounting means for the feed rollers on the input end, wherein the end of the inside feed roller on the input side extends beyond a right side cover and its shaft engages a timing belt which is turned by the shaft of the inside feed roller on the output side which also extends beyond the right side cover, said inside feed roller on the output side being powered by a motor means at the end of its shaft which extends beyond a left side cover, so that both inside feed rollers travel at the same RPM which, in turn, results in the feed roller at the input end and the feed roller at the output end also revolving at the same RPM, being passively driven only by the non-skid continuous conveyor belt means.

5. An apparatus as defined in Claim 1, wherein the hold down means to hold the material to be cut against a non-skid continuous conveyor belt means includes a plurality of hold down rollers with non-marring surfaces, held down against the material to be cut by spring loaded arm means, so said material to be cut is held in contact with the non-skid continuous conveyor belt means and in constant relation to the cutting means as it passes through the cutting

means.

6. An apparatus as defined in Claim 2, wherein the powered cutting means is one or more circular saws, suitable for cutting wood boards, and capable of being set along the length of the saw drive shaft by remote means, either manually or by computer means.

7. An apparatus as defined in Claim 3, wherein the non-skid continuous conveyor belt means is 9/32 inch thick and comprised of a non-skid top surface of No. 37 Scandera Red Carbox Rough Top on 3 ply 135 pound polyester with a bottom surface of Friction Surface (Caroxilated nitril X F.S.), to which is bonded one or more Browning Manufacturing Company Grip Notch grip belts, commonly known as an "A" section belt, and having scallop shaped cuts partially through its thickness across its width and regularly spaced along its length parallel to the length of the non-skid continuous conveyor belt.

8. An apparatus as defined in Claim 5 wherein the hold down means to hold the material to be cut against a non-skid continuous conveyor belt means includes a plurality of hold down rollers with non-marring surfaces, held down against the material to be cut by pneumatic cylinder loaded arm means, so said material to be cut is held in contact with the non-skid continuous conveyor belt means and in constant relation to the cutting means as it passes through the cutting means.

9. An apparatus as defined in Claim 1, wherein the input non-skid continuous conveyor belt means and the output non-skid continuous conveyor belt means are comprised of a single non-skid continuous conveyor belt means for use in situations where the powered cutting means does not come into interference with the non-skid continuous conveyor belt means.

10. An apparatus as defined in Claim 1, wherein the improved apparatus is combined in series with one or more other units of the improved apparatus so that multiple cutting or shaping means may be applied to the flat, rigid, cuttable material.

1 11. An apparatus as defined in Claim 1, wherein said power cutting means includes one
2 or more high pressure abrasive cutting means.
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4 12. An apparatus as defined in Claim 1, wherein one or more cutting means are
5 comprised of router cutters.

6 13. An apparatus as defined in Claim 1, wherein said powered cutting means includes
7 one or more circular saw blades or shaping means, each powered by a separate arbor motor
8 means and positioned along side or above one or more non-skid continuous conveyor belt means.
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